

In The Claims

Applicant submits below a complete listing of the current claims, with any insertions indicated by underlining and any deletions indicated by strikeouts and/or double bracketing.

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of the Claims

1. (Currently amended) A method for transmitting, between a monitoring circuit integrated ~~to~~ with a microprocessor and an analysis tool, digital messages each comprising at least one data packet, comprising ~~the steps of~~:

a/ dividing each data packet into successive segments of same predetermined size, each segment being classified according to one or the other of the five following types of segment:

- segment containing a message start (~~SM~~);
- segment containing intermediary data (~~NT~~);
- segment containing a packet end (~~EP~~);
- segment containing a message end (~~EM~~); or
- empty segment (~~ID~~);

b/ sending at the same time as each segment an identification signal (~~MSEO~~) characterizing the type difference between the considered segment and the previous segment; and

c/ reconstituting the packets of each message by arranging end to end the segments containing data of a same packet;

~~characterized in that~~ wherein a segment containing both the start and the end of a message is classified as being a segment containing a message end (~~EM~~), and a segment containing both the start of a message and the end of a first packet of the message is classified as being a segment containing a packet end (~~EP~~).

2. (Currently amended) The method of claim 1, in which:

a segment containing a message start (~~SM~~) or an empty segment (~~ID~~) may be transmitted after a segment containing a message end (~~EM~~) or an empty segment (~~ID~~);

a segment containing intermediary data (~~NT~~) may be transmitted after a segment containing a message start (~~SM~~) or intermediary data (~~NT~~) or a packet end (~~EP~~); and

a segment containing a packet end (~~EP~~) or a message end (~~EM~~) may be transmitted after a segment of any type.

3. (Currently amended) The method of claim 2, in which the identification signal (~~MSEO~~) has:

a first value (~~00~~) if the transmitted segment contains a message start (~~SM~~) or intermediary data (~~NT~~);

a second value (~~01~~) is if the transmitted segment contains a packet end (~~EP~~);

a third value (~~10~~) if the transmitted segment contains a message end (~~EM~~) and if the previous segment contained a message end (~~EM~~) or was an empty segment (~~ID~~); and

a fourth value (~~11~~) if the transmitted segment is empty (~~ID~~), or if the transmitted segment contains a message end (~~EM~~) and if the previous message contained a message start (~~SM~~), intermediary data (~~NT~~), or a packet end (~~EP~~).

4. (Currently amended) A device for transmitting, between a monitoring circuit integrated to a microprocessor and an analysis tool, digital messages, each of which comprises at least one data packet, comprising:

~~a—~~means (~~18~~) for dividing each data packet into successive segments of same predetermined size, each segment being classified according to one or the other of the five following segment types:

- segment containing a message start (~~SM~~);
- segment containing intermediary data (~~NT~~);
- segment containing a packet end (~~EP~~);
- segment containing a message end (~~EM~~); or
- empty segment (~~ID~~);

~~a—~~means (~~18~~) for sending at the same time as each segment an identification signal characterizing the type difference between the considered segment and the previous segment; and

a-means (24) for reconstituting the packets of each message by arranging end to end the segments containing data of a same packet;

~~characterized in that~~ wherein the means (18) for dividing each data packet classifies a segment containing both the start and the end of a message as being a segment containing a message end (EM), and classifies a segment containing both the start of a message and the end of a first packet of the message as being a segment containing a packet end (EP).